

REMARKS/ARGUMENTS

Claim 5 has been amended to remove the optional statement, and this has been presented as added claim 7. This is respectfully submitted to overcome the rejection under 35 U.S.C. 112.

The rejection of claims 4 and 6 under 35 U.S.C. 102(b) as being anticipated by Colibert et al, cited, is respectfully traversed.

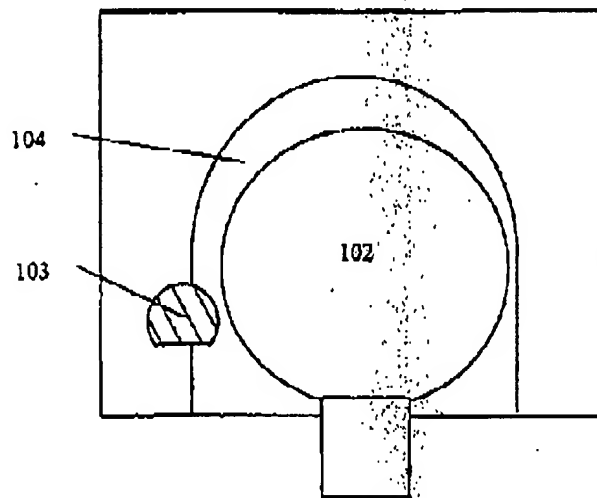
In the patented ball hitch coupler, once ball hitch 102 is placed into ball hitch cavity 104, cam pin 103 of polished steel is rotated so that a portion of the cam pin extends out, as shown in Fig. 1, to restrain the ball hitch from being released by coupler housing 101 (col. 3, lines 20-32). The part of the cam pin projecting into cavity 104 correspond to recess 501 (Figs. 5a, 5b) since ball hitch 102 may be placed into the cavity or removed therefrom when the cam pin is in a position in which recess 501 is in cavity 104.

As Fig. 1 shows, that part of cam pin 103 projecting into cavity 104 is relatively small in relation to the diameter of ball hitch 102, which is restrained only along a small portion of its circumference. If the diameter of ball hitch 102 is

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smaller than that of cavity 104, the ball hitch is movable in the cavity. This enables the ball hitch to be moved to the side of ball hitch cavity 104 opposite to cam pin 103 which, in turn, reduces the portion of the cam pin holding ball hitch 102 in the cavity. This increases the tension in the cam pin and in the ball hitch in the contact area between the cam pin and the ball hitch. If the difference in the diameters of the ball hitch and the cavity is too great, the ball hitch may be removed from the cavity even when the cam pin has been rotated into its restraining position so that the ball hitch is no longer held in the cavity. This is shown in the following sketch, in cam pin 103 is shown in its locking position while ball hitch 102 can be removed from cavity 104 because of the relatively small diameter of the ball hitch.



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It is obvious from the above that it is essential for the Colibert et al arrangement to maintain an accurate correlation between the diameters of ball hitch 102 and ball hitch cavity 104.

It is well known that dimensional inaccuracies occur in the casting of steel, and such inaccuracies are removed by polishing or otherwise treating the surfaces where such inaccuracies exist. Therefore, to obtain the required accuracy between Colibert et al's ball hitch and ball hitch cavity, the crust resulting from the casting process must be removed from ball hitch cavity 104.

In Applicant's coupling device, ball socket 8 is comprised of molded article 9 and the ball socket is held down on coupling ball 6 from above in the coupling position holding-down clamp 14 (page 3, lines 3/4 of specification). In this coupling position, the ball is securely held in the socket, regardless of any play between ball and socket, because clamp 14 clamps the socket against the ball. In contrast to the restraining of the ball in the socket by the cam pin of Colibert et al, applicant's arrangement tolerates a larger play between ball and socket. Therefore, the casting crust can remain on the interior of the socket, and no further work is needed to adapt the same accurately to the dimension of the ball.

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In view of the above, it is respectfully submitted that the reference of Colibert et al to "cast steel for the coupler housing body" cannot be interpreted as precluding after-treatment of the cast steel. Therefore, claims 4 and 6 are respectfully submitted to be patentable over the reference.

Applicant encloses a copy of Australian patent application No. 4557/36, whose acceptance was published October 14, 1937. This reference as cited by the Australian Patent Office on October 22, 2002. Applicant also encloses Form PTO-1449 and requests the charge of \$150.00 for late filing of the Information Disclosure Statement to be charged to Deposit Account No.

There is also attached a petition for a three-month extension, with the request to charge the fee to the above deposit account.

A sincere effort having been made to overcome all grounds of rejection, favorable reconsideration and allowance of claims 4 7 are respectfully solicited.

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Respectfully submitted,

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Enclosures:

Copy of Australian patent appin. 4557/36

Request for Extension of time

I hereby certify that this correspondence is being sent to the US PTO by telefax, Fax No.:  
1-703 872-9326, on May 7, 2004.

  
Ingrid Mittendorf

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